Supporting grassroots innovation

GIVEN THE HARSH ECONOMICS OF AGRICULTURE, most growers seek innovative ways to stay viable. DPR promotes strategies that lessen the risks to people and the environment while strengthening California agriculture's world leadership.

Since 1996, DPR has been immersed in the business of building grassroots support for IPM — integrated pest management — through a wide-ranging grants program. Our grants encourage an array of research and experimentation projects with one goal — to identify workable, least-hazardous pest management solutions. DPR has distributed about $8.4 million for 200 IPM grants to commodity groups, school districts and urban community projects. While pesticide usage depends on many factors, three major commodity groups with extensive grant projects — almonds, wine grapes, and strawberries — saw their cumulative pesticide applications drop by more than seven million pounds in 2000.

Under the Davis Administration, we've reorganized our grant structure to create a more efficient program that speeds up development and adoption of reduced-risk pest management. Smaller-scale proposals may qualify for our Pest Management Grants to fund applied research and demonstration projects. Projects that demonstrate great merit can then expand into statewide Pest Management Alliances. These partnerships between DPR and key industry groups now benefit from a continuing budget appropriation from the Davis Administration and the Legislature, allowing individual Alliances to apply for additional funding over subsequent years and better plan future activities to achieve their full potential.

Several Alliance projects feature side-by-side plantings so conventional techniques can be compared to reduced-risk strategies. The Dried Plum (Prune) Alliance and the Almond Alliance have had notable success using this approach.

SOME CASE STUDIES OF SUCCESS

The Dried Plum Alliance, established in 1998, eliminated winter applications of highly toxic organophosphate insecticides in 33 demonstration orchards that account for 11 percent of California's dried plum acreage. Reduced-risk insecticides and dormant oils replaced the organophosphates in these trials. This Alliance conducted 24 educational meetings to spread the word within the industry. This research and outreach have resulted in potential savings for growers estimated at nearly $1 million annually.

The Almond Pest Management Alliance has used a combination of extensive orchard monitoring, reduced-risk pesticides, and cover crops to reduce grower reliance on organophosphates, while minimizing pest damage. Two years of field trials have shown these alternatives can compete with conventional practices in cost and effectiveness. Growers are getting better at scientific methods that target pests and which allow applications of less-toxic pesticides to be scheduled for peak effectiveness. Less-hazardous pesticides sometimes cost less, and in a tight economy, that becomes another selling point.

California ranks second in U.S. pear production, with nearly 300 growers statewide. Funding from both DPR Grants and Alliance programs encouraged many pear growers to adopt "puffers" to control their most destructive pest, the codling moth. Puffers are devices that dispense a pheromone (scent) similar to that of female codling moths. One puff of pheromone is equal to the smell of 7 to 10 million female codling moths. The scent attracts and confuses male moths, preventing them from mating, thereby reducing pest populations. Using "puffer" mating disruption has replaced up to four applications of organophosphate insecticides annually. Over a three-year period, growers with more than 3,000 acres of pears reduced use of organophosphates by 65 percent in Lake County, 75 percent in the Sacramento region and 87 percent in Mendocino County.

In 2001, DPR awarded approximately $1.4 million for 19 grants and nine Alliances, with emphasis on reducing worker exposure, protecting surface and ground water, and alternatives to high-toxicity pesticides and fumigants.

We also developed a database to track the success of grant projects, and produced a pamphlet to recognize IPM grant success stories and thus encourage new applicants to join our ranks.

We provide more public data than anyone

DPR provides the public with more data on pesticide use — and more detailed data — than any other state or federal source. Among other benefits, the data helps us track pesticide use trends and focus our regulatory efforts. Early in 2002, we will finalize use report data for 1999 and 2000, using new error-checking computer software. We also plan to complete a detailed trend analysis of changes in organophosphate use on almonds during the last nine years and examine alternate methods of pest control for overwintering pests.

So far, our analyses show that dormant use of highly toxic pesticides has decreased in recent years. In many cases, growers have turned to "softer" chemicals such as dormant oils and Bacillus thuringiensis (Bt).